

## Region 1 FY 2014 Invasive Species Control Program Proposal

**Refuge/complex name:** Willamette Valley NWRC

**Project title:** Eradication of False Brome within the Mill Hill Unit, W.L. Finley NWR, Corvallis, OR

**Total amount requested:** \$12,000

**Project Description:** Slender false brome (*Brachypodium sylvaticum*) is a non-native grass species invading habitats in western Oregon, where it is listed as a noxious weed by the Oregon Department of Agriculture. It does well in both shaded woodland settings and open prairie habitats, making it a fierce competitor to many native forbs and a serious impediment to the health of the native understory. False brome has shown it can become a dominant monoculture both in wooded understories and open prairies (evident in watersheds north of the Refuge). It has also been found to be unpalatable for wildlife species. Because of its shade tolerance, false brome could spread through oak woodland understories where treatment would be increasingly difficult and potentially cost prohibitive.

Small numbers of plants have been found in recent years along popular hiking trails at W.L. Finley NWR, likely transplanted by seed from other recreation areas nearby. The Refuge has kept false brome controlled with herbicide treatments in the Woodpecker Loop area (1 mile loop trail) but remnant patches still persist. However, without consistent treatment, false brome has established and spread significantly in the vicinity of the Mill Hill Trail (2.5 mile loop). Recently it was discovered that false brome had spread from the trail into an adjacent two acre oak site used for a long term Forest Service acorn study. With native prairie and significant oak woodlands in close proximity to Mill Hill, it is vital to stop the spread before it invades further into these high value habitats. Potentially threatened by false brome is a population of federally listed golden paintbrush on Bellfountain Prairie (adjacent to Mill Hill Trail).

Approximately 40 acres of total area will be surveyed for false brome, with a projected 5 acres of actual treatment area. Using this updated information, false brome plants would be mowed in June (prior to seed maturity) and followed up with chemical applications (topical and pre-emergent) in the fall.

**Project objectives:** Objectives 9b/d within the WVNWRC CCP refer to the protection of listed plants, with a strategy to “implement IPM measures....such that invasive species do not threaten the integrity of the habitat or sub-populations”. Similar strategies are listed under CCP objectives for prairie and oak habitats. The objective of this proposal is to eradicate 80% of all adult false brome plants within a 40 acre area, including any contaminated oak/prairie habitats within the Mill Hill area and plants adjacent to Mill Hill and Woodpecker Loop Trails, within the first treatment year (2014).

**Potential for maximum control/Likelihood of success:** The combination of seed head treatment prior to maturity and later herbicide application (topical to kill adult plants with a pre-emergent to prevent older seed germination) has been noted in the literature as the most effective control method(s) to employ. The plan to effectively eradicate false brome on Finley involves both strategic timing and integrated treatments. Mowing, hand cutting seed heads, and spraying

**Comment [BF1]:** A quantified and ambitious objective. What more can I ask for?

**Comment [BF2]:** The type of assurance I am looking for.

at two intervals during the growth period will allow optimal reduction in adult plants and minimize seed germination of new populations. The goal is to reduce the plant population and distribution by >80%. Realistically, the expectations for treatment success are that 15-20% of the sites will require re-treatment in 2015.

**Biological benefit to priority species or BIDEH:** The direct benefit of early stage control of false brome is it can protect the integrity of the native oak understory, where its spread could quickly become unmanageable and difficult to treat. In addition, false brome can easily spread to nearby prairie habitats, where it would threaten existing populations of listed plants including golden paintbrush and other rare species.

**Sustainability:** Several measures will be employed to sustain the success of the eradication effort. Although continued public use on the two hiking trails has the potential to bring in new source material, this occurrence will hopefully be reduced with public outreach. Signs will be posted to educate hikers on identification and recommended actions to take to minimize the spread of seed. By targeting hiking trails, the threat of seed dispersal from public use should be minimized, which in turn reduces the potential need for future treatments. All equipment used to treat false brome sites (or equipment operated in known occupied areas) will be thoroughly cleaned prior to transport to reduce the risk of spreading seeds. Native seed will be distributed on larger treatment sites to occupy the area with competitive natives and discourage re-infestation (in 2015 after efficacy of the pre-emergent has dissipated). Follow-up herbicide topical treatments as needed will be projected on work plans for 2015, estimated at 20% of the known sites.

**Monitoring:** Pre-treatment monitoring will involve following up on a 2012 mapping project previously initiated by the Teen Weed Spotters, a program run by the SWCD involving local students. Newly discovered populations will be mapped and marked. Post treatment monitoring will be conducted the following spring (2015 contract) with site visits to determine success of treatment.

**Budget:** Herbicide applications will be a combination of FWS staff and contractors (2014 and 2015). Native seed will be purchased but not sown until 2015. Monitoring for 2015 will be by botanical contractor. Chemical supplies will be purchased and stored for later use as needed.

Chemical/application equipment	\$1,000
Mowing/hand cutting seed heads	2,000
Herbicide application (contract and/or FWS staff)	6,000
Follow up monitoring/mapping (contract for 2015)	2,000
Native seed for treated areas	500
Outreach materials	500

**Refuge Point of Contact:** Jock Beall, Refuge Biologist or Molly Monroe, Asst. Refuge Biologist (541)757-7236

**Comment [BF3]:** This offers a little of both. I know what this plant could do if not treated in an ED/RR fashion.

**Comment [BF4]:** They are doing the best that they can considering the influence of the trails.

**Comment [BF5]:** I'm not entirely clear what this will accomplish. Above it mentions that 40 acres will be surveyed. Contract monitoring in 2015.